



DECLARATION

I, NOBUAKI KATO, a Japanese Patent Attorney registered No. 8517, of Okabe International Patent Office at No. 602, Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, Japan, hereby declare that I have a thorough knowledge of Japanese and English languages, and that the attached pages contain a correct translation into English of the priority documents of Japanese Patent Application No. 11-344565 file on December 3, 1999 in the name of CANON KABUSHIKI KAISHA.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made, are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this 14th day of July, 2006

NOBUAKI KATO



PATENT OFFICE
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This is to certify that the annexed is a true copy of the following
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Applicants: CANON KABUSHIKI KAISHA

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Applicant's Information

Identification No. [000001007]

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Address: 30-2, 3-chome, Shimomaruko, Ohta-ku, Tokyo

Name: CANON KABUSHIKI KAISHA

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[Title of the Invention] ELECTRIC PROGRAM GUIDE EXPORT
APPARATUS, IMPORT APPARATUS, TELEVISION BROADCASTING
PROGRAM SELECTION METHOD, AND STORAGE MEDIUM

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[Inventor]

[Address] c/o CANON KABUSHIKI KAISHA, 30-2,
Shimomaruko 3-chome, Ohta-ku, Tokyo

[Name] Hideaki YUI

[Inventor]

[Address] c/o CANON KABUSHIKI KAISHA, 30-2,
Shimomaruko 3-chome, Ohta-ku, Tokyo

[Name] Shuntaro ARATANI

[Applicant for Patent]

[Id. No.] 000001007

[Name] CANON KABUSHIKI KAISHA

[Agent]

[Id. No.] 100090273

[Patent Attorney]

[Name] Takayoshi KOKUBUN

[Phone No.] 03-3590-8901

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[Title of the Invention] ELECTRIC PROGRAM GUIDE EXPORT
APPARATUS, IMPORT APPARATUS, TELEVISION BROADCASTING
PROGRAM SELECTION METHOD, AND STORAGE MEDIUM

[Claims]

[Claim 1] An electric program guide export apparatus in a digital broadcast receiving system, including receiving means for receiving a broadcasting signal to which program information is added for each transmission channel, tuning means for tuning a predetermined transmission channel from the signal received by said receiving means, display means for processing the signal tuned by said tuning means and displaying a picture, program information extracting means for extracting said program information included in the signal tuned by said tuning means, and electric program guide generating means for making a program table based on said program information extracted by said program information extracting means and displaying the program table on a screen, said apparatus comprising:

direct selecting means for directly designating a recommended program from said electric program guide that is displayed by an operation of an user;

storage means that can store program attribute data of the recommended program that is directly selected by said direct selecting means, by a number of the selected

programs;

file generating means for generating an export format file of the recommended program that is directly selected by said selecting means among the program attribute data of recommended program stored in said storage means, described with program attribute identification tag; and

communication control means for export-transmitting said format file to a designated address in a network.

[Claim 2] An electric program guide export apparatus according to claim 1, wherein the program attribute data of the recommended program that is directly elected is added by using said program information by broadcast extracted by said program information extracting means.

[Claim 3] An electric program guide export apparatus according to claim 1, wherein the program attribute data of the recommended program that is directly elected is recommended comment information of one program, which is added by an input operation of the user.

[Claim 4] An electric program guide export apparatus according to claim 1, wherein the program attribute data of the recommended program that is directly elected is related URL information of one program, which is added by an input operation of the user.

[Claim 5] An electric program guide export apparatus according to claim 1, wherein the program attribute data of

the recommended program that is directly elected is recommended index information of one program, which is added by an input operation of the user.

[Claim 6] An electric program guide export apparatus in a digital broadcast receiving system, including receiving means for receiving a broadcasting signal to which program information is added for each transmission channel, tuning means for tuning a predetermined transmission channel from the signal received by said receiving means, display means for processing the signal tuned by said tuning means and displaying a picture, program information extracting means for extracting said program information included in the signal tuned by said tuning means, electric program guide generating means for making a program table based on said program information extracted by said program information extracting means and displaying the program table on a screen, and selection filter means for filtering a program in accordance with a retrieval condition, said apparatus comprising:

storage means that can store said retrieval condition;

file generating means for generating an export format file of the recommended program based on said retrieval condition stored in said storage, described with program attribute identification tag; and

communication control means for export-transmitting

said format file to a designated address in a network.

[Claim 7] An electric program guide export apparatus according to claim 1 or 6, wherein recommended comment information of a whole program list, which is added by an input operation of the user, is added to said recommended program export format file as one attribute of the program attribute data of recommended program.

[Claim 8] An electric program guide export apparatus according to claim 1 or 6, wherein image data that allows a making-out user to be identified, is added to said recommended program export format file as one attribute of the program attribute data of recommended program.

[Claim 9] An electric program guide import apparatus in a digital broadcast receiving system, including receiving means for receiving a broadcasting signal to which program information is added for each transmission channel, tuning means for tuning a predetermined transmission channel from the signal received by said receiving means, display means for processing the signal tuned by said tuning means and displaying a picture, program information extracting means for extracting said program information included in the signal tuned by said tuning means, and electric program guide generating means for making a program table based on said program information extracted by said program information extracting means and displaying the program

table on a screen, said apparatus comprising:

communication control means for import-receiving a format file of recommended program data which one or more program is designated among addresses in a network;

decoding means for interpreting contents in accordance with an identification tag of program attribute of said format file that is imported;

compatibility determining means of the decoded format file;

storage means for the program attribute data that is determined as compatible by said compatibility determining means;

program attribute data update means for replacing the program attribute data of the recommended program stored in said storage means with the newest data of said program information by the broadcast extracted by said program information extracting means; and

import electric program guide generating means for displaying only the recommended program that is updated by said program attribute update means on a screen.

[Claim 10] An electric program guide import apparatus in a digital broadcast receiving system, including receiving means for receiving a broadcasting signal to which program information is added for each transmission channel, tuning means for tuning a predetermined transmission channel from

the signal received by said receiving means, display means for processing the signal tuned by said tuning means and displaying a picture, program information extracting means for extracting said program information included in the signal tuned by said tuning means, electric program guide generating means for making a program table based on said program information extracted by said program information extracting means and displaying the program table on a screen, and selection filter means for filtering the program in accordance with a retrieval condition, said apparatus comprising:

communication control means for export-receiving a format file of recommended program data which said retrieval condition is designated among addresses in a network;

decoding means for interpreting contents in accordance with an identification tag of program attribute of said format file that is imported;

compatibility determining means of the decoded format file;

storage means for extracting program attribute data of a recommended program that meets said retrieval condition by using said selection filter means in accordance with the retrieval condition of the program attribute data that is determine as compatible by said compatibility determining means; and

import electric program guide generating means for displaying only the recommended program stored in said storage means on a screen.

[Claim 11] An electric program guide import apparatus according to claim 9, wherein said compatibility determining means compares and determines a broadcast service corresponding to the recommended program data that is imported and a broadcast service corresponding to said digital broadcast receiving system, and outputs a message and does not perform an import process when incompatibly is determined by said compatibility determining means.

[Claim 12] An electric program guide import apparatus according to claim 9, wherein said compatibility determining means compares and determines a compatible period of the recommended program data that is imported and the data and time of said digital broadcast receiving system, and outputs a message and performs an import process for programs at a current date and time and later when incompatibly is determined by said compatibility determining means.

[Claim 13] An electric program guide import apparatus according to claim 9, wherein said compatibility determining means compares and determines an existence of PPV for the recommended program data that is imported and a current PPV contract state of the user in said digital broadcast receiving system, and outputs a message and performs an

import processes for all programs when incompatibly is determined by said compatibility determining means.

[Claim 14] An electric program guide import apparatus according to claim 9, wherein said compatibility determining means compares and determines an existence of vide-and-audio restriction for the recommended program data that is imported and a current age of the user in said digital broadcast receiving system, and outputs a message and performs an import processes for all programs when incompatibly is determined by said compatibility determining means.

[Claim 15] An electric program guide import apparatus according to claim 10, further comprising means for performing a selection screen display of a recommended program list in accordance with the program attribute data of a whole recommended program list that is added to said format file and for allowing the user to select recommended program list on said selection screen, when there is one or more decoded format file.

[Claim 16] An electric program guide import apparatus according to claim 9, further comprising means for reading program attribute data of recommended program stored in said storage means, performing sort screen display of recommended programs by indexes of the program attribute data of the recommended program, and deleting a program determined as

unnecessary by the user on the sort screen, from said storage means.

[Claim 17] An electric program guide import apparatus according to claim 9 or 10, further comprising means for reading program attribute data of recommended program stored in said storage means, performing sort screen display of recommended programs by genres of the program attribute data of the recommended program, and deleting a program determined as unnecessary by the user on the sort screen, from said storage means.

[Claim 18] An electric program guide import apparatus according to claim 9 or 10, further comprising means for reading program attribute data of recommended program stored in said storage means, performing sort screen display of recommended programs by charge restrictions of the program attribute data of the recommended program, and deleting a program determined as unnecessary by the user on the sort screen, from said storage means.

[Claim 19] An electric program guide import apparatus according to claim 9 or 10, wherein said import electric program guide generating means mixes the program attribute data of the recommended program by the broadcast updated by said update means, stored in said storage means and the program attribute data of the recommended program set by the user, extracted from said format file.

[Claim 20] An electric program guide import apparatus according to claim 9, wherein the program attribute data of the recommended program set by the user is recommended comment information of one program.

[Claim 21] An electric program guide import apparatus according to claim 19, wherein the program attribute data of the recommended program set by the user is related URL information of one program.

[Claim 22] An electric program guide import apparatus according to claim 19, wherein the program attribute data of the recommended program set by the user is recommended index information of one program.

[Claim 23] A television broadcast program tuning method comprising:

- a step of directly selecting a recommended program on a EPG screen of a digital television receiver;

- a step of exporting data of said recommended program that is directly designated to an outside as the recommended program;

- a step of narrowing said recommended program by a predetermined retrieval condition; and

- a step of exporting the recommended program that is narrowed to the outside in form of retrieval condition data.

[Claim 24] A television broadcast program tuning method comprising:

a step of importing program directly-designated data and a retrieval condition as a recommended program;

a step of judging compatibility of a system of a recommended program by another user;

a step of performing update together with the newest program information transmitted from a broadcast station as to only compatible programs; and

a step of making a program table of only recommended programs.

[Claim 25] A storage medium storing a program making each means according to any one of said claims so as to be readable from a computer.

[Claim 26] A storage medium storing a program making a procedure carrying out said television broadcast program tuning method so as to be readable from a computer.

[Detailed Description of the Invention]

[0001]

[Technical Field of the Invention]

The present invention relates to an electric program guide export apparatus, an import apparatus, a television broadcast program tuning method, and a storage medium, and more specifically, it relates to a tuning apparatus that is suitable to simply selecting and tuning a program desired by an audience among the plurality of received channel information.

[0002]

[Description of the Related Art]

Television broadcasting and satellite broadcasting of an analog system currently used in Japan provide only a small number of broadcast channels. It is therefore easy to select a channel which broadcasts a desired program.

[0003]

More specifically, a user generally searches a desired program from a printed matter of a program table such as newspapers and magazines to select the channel which broadcasts the desired program, or a user obtains the channel number and broadcasting start time of a program which became a topic of conversation with friends or the like and selects that channel later at the home.

[0004]

Satellite broadcasting of a digital system (digital broadcasting) adopts high efficiency compression coding techniques (MPEG2 standards) so that the number of channels increases greatly as compared to conventional analog broadcasting systems. Namely, a plurality of programs is multiplexed to one bit stream, further, a plurality of such bit streams is transmitted, and therefore, a great number of programs is broadcasted as a whole.

[0005]

Therefore, it is not easy for a user to select a

program desired an audience among many programs in comparison with the conventional analog broadcasting systems. Therefore, in the digital broadcasting systems, in order to select a desired program among many programs easily, a broadcast station transmits program data together with program information used to select a program.

[0006]

On the other hand, a receiving side separates the received data to the program information that is added and displays a screen based on the program information as Electronic Program Guide (hereinafter, EPG). The audience selects a program while observing this display screen, and tunes the elected program with a tuning apparatus, thereby enjoying the desired program.

[0007]

However, in the usual tuning method for the digital broadcasting systems using the EPG, since there are an enormous number of channels, it takes a too long time to specify a desired program with difficulty. Therefore, in order to solve this problem, there is required means that can filtering-display only user preference programs among the enormous number of channels.

[0008]

As the conventional method proposed to solve this problem, there are proposed a method using program selection

attributes (such as genre, players, audio-video restriction and charge limit), a method using a user interactive input unit to generate a knowledge database of user preference, user life pattern and the like and to select a most preferred program by using this database, and other methods.

[0009]

[Problems to be Solved by the Invention]

However, every and each of these conventional methods is targeted to active users who positively search preferred programs, and provide users of this type with a comfortable program selecting means. Not only these active users, but also there are many passive users who desire to see to those programs recommended by friends having similar preference.

[0010]

This case cannot be denied, from the viewpoint that media users are often influenced by hearsay of other users. Under such circumstances, a passive program selection approach different from an active program selection approach has long been desired in order to meet the requirements for simple and comfortable program selection by passive users.

[0011]

In addition to such passive users, there are information supply type users who desire to provide their recommended programs by using a simple means not by using an oral approach. Such a recommended program providing means

for current digital television receivers does not exist.

[0012]

In view of the above points, it is an object of the invention to allow a user to find a preference program with ease without means for providing user recommended programs and condition setting for program restriction in order to extract user preference programs.

[0013]

[Means for Solving the Problems]

To attain the above-mentioned objects, according to the first invention of the present invention, the digital television receiving apparatus is provided with means of directly selecting recommended programs on the EPG screen and is provided with a function for exporting (transmitting) the direct-designated data to the outside as the recommended program, or the digital television receiving apparatus having a function of narrowing programs in accordance with a retrieval condition, is provided with a function for exporting (transmitting) to the outside as retrieval condition data, thereby providing program information updated by preference to another user.

The present invention is further characterized in that a function of importing (receiving) the program direct-designated data or the retrieval condition as the recommended program is provided, and a function of

automatically judging system compatibility of the recommended programs by another user, updating only compatible programs together with the newest program information, and making a program table including only recommended information is provided, thereby enjoying the programs recommended by the user who has similar preference, without searching preference programs positively.

[0014]

[Description of the Embodiments]

Fig. 1 is a block diagram showing the structure of a system according to an embodiment of the invention.

(Explanations of each block)

Each block in this system structure block diagram of Fig. 1 will be described first. A tuner unit 1 receives a signal of CATV, satellite broadcasting or digital broadcasting, selects (tunes in) a predetermined transmission channel from the reception data containing program information in accordance with a control signal supplied from a control unit 7 to be described later, and outputs the reception data of the selected transmission channel to a demodulation unit 2.

[0015]

The demodulation unit 2 performs a demodulation process suitable for the broadcasting type of input reception data. For example, if digital data is to be demodulated, the

demodulation unit 2 performs a digital demodulation process and then an error correction process to output the result to a demultiplexing unit 3. The demultiplexing unit 3 receives the signal output from the demodulation unit 2, and outputs a video signal, an audio signal and program information to a video and audio processing unit 4 and to a program information extraction unit 6.

[0016]

The video and audio processing unit 4 performs a decode process for a video signal compressed by MPEG2. The decoded video signal is stored in a frame memory of a picture synthesization unit 5, the frame memory having a capacity capable of storing an image of one frame. The decoded audio signal is converted by a D/A converter into an analog audio signal which is supplied via an amplifier to a speaker to produce sounds.

[0017]

The program information extraction unit 6 extracts program information added at the time of transmission from the output signal of the demultiplexing unit 3. In this case, program attribute data necessary for program selection is also extracted. The program information including the extracted attribute data is supplied to the control unit 7.

[0018]

The program attribute data is attribute data of each

program contained in a broadcasting signal. For example, the program attribute data includes genre information necessary for classifying programs into respective genres, program start/end time information, transmission channel information, information on broadcasting service type such as pay-per-view broadcasting, serial program information, information on program age limitation, and the like. If the transmitted broadcasting signal belongs to pay-per-view broadcasting, charge information may be added to the program in some cases.

[0019]

The control unit 7 performs various processes in accordance with programs stored in a ROM 9. The control unit 7 may be made of only logical circuits, or may be a CPU or a media processor capable of parallel computation.

[0020]

When an operation key of a remote commander 13-a or a keyboard 13-b is activated, an infrared ray signal is output from the remote commander 13-a or the keyboard 13-b and received by an IR receiving unit 12, and a reception result is supplied to the control unit 7.

[0021]

The control unit 7 receives program attribute data output from the program information extraction unit 6 and stores it in a memory unit 10. Since program attribute data

is transmitted at a predetermined period, the memory unit 10 always stores newest program attribute data.

[0022]

In response to a drawing command from the control unit 7, an EPG generation unit 8 develops data such as EPG screen data in the frame memory of the picture synthesization unit 5 by using an acceleration function such as BitBlt (bit block transfer) and DMA (direct memory access).

[0023]

ROM 9 stores character fonts if necessary, which fonts are used to develop character information on a screen. In accordance with a window management command from the control unit 7, the picture synthesization unit 5 reads display data from an internal memory while changing display addresses, and outputs the synthesized image of the video and the EPG to a display device 11.

[0024]

The display device 11 may be a flat panel (liquid crystal, plasma or the like) having a matrix electrode structure, a CRT, or any device which can display an image.

[0025]

A modem control unit 14 can receive various network services such as two-way broadcasting service, electronic mail service, and WWW service. A peripheral control unit 19 allows the control unit 7 to communicate with external

apparatus and may be a parallel part or a serial port such as RS-232C and IEEE 1394.

[0026]

With this peripheral control unit 19, a personal computer 20-a, a digital camera 20-b and the like can be connected to this system. A DTV receiver A 18 constructed as above can be connected to the Internet 15 via the modem control unit 14 and to another DTV receiver B 17 owned by another user or to a WWW server 16 on the network.

[0027]

Next, the characteristic operation of the embodiment system constructed as above will be described with reference to the flow chart of Fig. 2 illustrating a recommended program export process.

(Operation of normal program selsection)

When a user depresses a normal program selection button of the remote commander 13-a at first Step S101, a normal selection process is executed at Step S102. In the normal selection process, on an EPG screen such as shown in Fig. 3 as a normal program selection process image, a selection cursor is used to select a favorite program from the EPG screen displayed.

[0028]

A user moves a cursor to a desired program position on the screen, by using motion keys of the remote commander 13-

a, and at Step S103 a program decision button of the remote commander 13-a is clicked so that the desired program selection can be designated. At Step S104, the control unit 7 makes the tuner unit 1 to perform a tuning control and an image display process of the selected program.

[0029]

The normal program selection process has been described above. Next, means for notifying a favorite program selected by a user to another user will be described.

[0030]

(Operation of direct selection of recommended program)

When a user selects a recommended program selection button of the remote commander 13-a at Step S101, the system enters a recommended program selection mode which is characteristic to this embodiment.

[0031]

The user decides at Step S105 whether a recommended program selection method is directly selected on the EPG screen. If the direct selection is designated, as described earlier, on a recommended program selection process image such as shown in Fig. 4, the selection cursor is used to designate recommended programs one after another on this EPG screen.

[0032]

When the program decision button of the remote

commander 13-1a is depressed at Step S106, a recommended program can be selected to thereafter follow Step S107. At Step S107, the user sets the attribute data. The attribute data of the recommended program is the data intentionally input by the user.

[0033]

Specifically, a recommendation index input window such as shown in Fig. 4 is displayed to allow a user to input a recommendation index. Also, a related URL input window is displayed to allow a user to enter a URL related to the program as program reference information. Although the keyboard 13-b is used to directly write URL on the screen in Fig. 4, URL directly designated by a Web browser of the Internet may be reflected upon.

[0034]

Furthermore, a recommendation comments input window is displayed to allow a user to add comments to the program information sent from the broadcasting station. The recommended program attribute data intentionally added by a user at Step S107 and the program attribute data extracted from the attribute data sent from the broadcasting station are stored at Step S108 in the memory unit 10 as the recommended attribute data of "user + broadcasting station".

[0035]

Each Step from Steps S106 to S108 is repeated until all

recommended programs are listed up. If the user judges at Step S109 that the recommended program direct selection is to be stopped at Step S110 a recommended program pickup list screen is displayed on the display device 11.

[0036]

A list of programs picked up by the user is displayed so that the user can delete the registered program or add a new program by using the pickup list. If the recommended program pickup list is not decided as Step S111, then at Steps S106 to S109, a recommended program can be added or the program attribute set by the user at Step S107 can be changed.

[0037]

If the recommended program pickup list is decided at Step S111, the flow advances to Step S112 whereat recommended program pickup list information is generated. The pickup list information is addition information used for making another user who received the recommended program information briefly recognize who made up this pickup list information and what recommended programs were picked up.

[0038]

Specifically, the control unit 7 displays the windows shown in Fig. 4 on the display. The recommendation comments of the user who made up the recommended program pickup list are directly written in the window by using the keyboard 13-

b.

[0039]

In order to make another user easily confirm the user who made up the pickup list information, image icon data is generated. If the recommended program pickup list is to be passed to users well known by the list maker, it is effective if the control unit 6 operates to form image icon data from an image of the list maker picked up with the digital camera 20-b to image icon data.

[0040]

If the recommended program pickup list is to be passed to a number of unknown users, it is effective to form a banner such as those used at personal home pages on the Internet by using the personal computer 20-a. The recommended program pickup list made up in this manner is stored in the memory unit 10.

[0041]

Next, at Step S113 a program direct selection export format file which collects all information described above is formed. The contents of this file are shown in Fig. 5 and contain mainly the following three categories of information.

[0042]

These categories will be described briefly.

(1) Information on making-up person indicating the name

of a person who selected recommended programs. If the system registers beforehand the names of making-up persons, the system automatically generates the making-up person information, whereas if the system does not register them, the user enters the making-up person information from the keyboard 13-b.

[0043]

(2) Making-out date representative of the date when the recommended program was selected. The system automatically generates the making-out date by referring to a system timer.

[0044]

(3) Icon data representative of the banner for the making-up person or a captured image generated at Step S112.

[0045]

(4) Pickup list information representative of comments on the list contents entered by the making-up person at Step S112.

[0046]

(5) Compatible service name representative of the name of a broadcaster such as "Sky Perfect TV" which generated a recommended program. A user subscribing the service of this broadcaster can look at the recommended program. The system automatically generates this name.

[0047]

(6) Compatibility period information of a picked-up

recommended program. The system checks the date and the start and end times of the picked-up recommended program and automatically generate the compatibility period.

[0048]

(7) The number of registered programs representative of the number of picked-up recommended programs. The system checks the number of picked-up programs and automatically generate it.

[0049]

(8) Program name automatically generated by the system by using the program name attribute extracted from the program information extracting unit 6 as the program determined at Step S106.

[0050]

(9) Broadcasting date and time (start time, end time) automatically generated by the system by using the broadcasting date and time attribute extracted from the program information extracting unit 6 for the program determined at Step S106.

[0051]

(10) Channel number automatically generated by the system by using the channel number attribute extracted from the program information extracting unit 6 for the program determined at Step S106.

[0052]

(11) Genre automatically generated by the system by using the genre attribute extracted from the program information extracting unit 6 for the program determined at Step S106.

(12) PPV (pay-per-view) or not automatically generated by the system by using the PPV attribute extracted from the program information extracting unit 6 for the program determined at Step S106.

[0053]

(13) Audio-visual restriction or not automatically generated by the system by using the audio-visual restriction attribute extracted from the program information extracting unit 6 for the program determined at Step S106.

[0054]

(14) Serial program or not automatically generated by the system by using the serial program attribute extracted from the program information extracting unit 6 for the program determined at Step S106.

[0055]

The data of (8) to (14) is automatically generated and added from the program information of received broadcasting that is dumped in the memory.

[0056]

(15) Recommendation index information entered at Step S107 by the user from the recommendation index input window

shown in Fig. 4.

[0057]

(16) Related link URL information entered at Step S107 by the user from the related URL input window shown in Fig. 4.

[0058]

(17) Recommendation comments information entered at Step S107 by the user from the recommended comments input window shown in Fig. 4.

[0059]

The data of (15) to (17) is added by the user as new attributes when the user selects each recommended program, and is characteristic to this embodiment. Such contents data set is formed as many as the number of picked-up registration programs in (7).

[0060]

The data (1) to (17) in the program direct designation export format file is defined to be described together with an identification tag in order for a file destination to easily discriminate between these data items (1) to (17). The recommended program direct selection method by a user has been described above.

[0061]

(Operation in retrieval condition selection of recommended program)

Next, the operation to be executed when it is judged at Step S105 that the direct selection on the EPG screen is not used.

In this case, it is judged at Step S114 whether recommended program retrieval conditions are selected. When it is judged that a retrieval conditions selection is performed, a retrieval condition is input at Step S115.

[0062]

The retrieval conditions are input by a user by designating a logical operation formula of all broadcasting parameters capable of being extracted such as genre and players. In accordance with the designated logical operation formula, broadcasting programs are filtered. A retrieval method similar to those used in the Internet can be used.

[0063]

Therefore, since those are different from the principle of this embodiment, no detailed explanation is given. At Step S116, in accordance with the retrieval conditions, filtered results are displayed. If a user determines at Step S117 that the retrieved contents are satisfactory, it is determined whether the recommended programs under the retrieval conditions are to be exported.

[0064]

If it is determined that the recommended programs under

the retrieval conditions are not to be exported (e.g., since the programs to be detected under the retrieval conditions may change with a retrieved day, only the programs detected at the present time are intended to be exported as recommended programs), the flow advances to Step S118 whereat only attribute data of each program detected under the retrieval conditions and transmitted from the broadcast station is dumped in the memory.

[0065]

Thereafter, the processes similar to those at Steps S112 and S113 are performed. A different point from the above-described processes is that the user does not add new attributes of (15) to (17) shown in the file of Fig. 5.

[0066]

It the user determines at Step S117 that the program detected under the retrieval conditions are intended to be exported, recommended program pickup list information is generated at Step S119. This operation is similar to Step S112.

[0067]

Next, at Step S120 a retrieval condition designation export format file is formed. The format side of this file is shown in Fig. 6. The contents include mainly three categories. The data items (1) to (5) are generated in the similar manner to forming the file shown in Fig. 5. A

different point from the file shown in Fig. 5 is that the contents of the file are described under the retrieval conditions (18).

[0068]

The data items (1) to (5) and (18) in the retrieval condition designation export format file are defined to be described together with an identification tag in order for a file destination to easily discriminate between these data items. The recommended program retrieval condition selection method by a user has been described above.

[0069]

The two files generated in the above manner are exported at Step S121. This output process may be performed in the following manners. First, each file is exported from a WWW browser pre-installed in the control unit 7 to the WWW server 16 via the modem control unit 6 and registered in a user home page preset to the WWW server 16.

[0070]

In this manner, new services can be realized which can transmit recommended programs selected by the user to a number of unknown users. Alternatively, each file is transmitted as a file attached file to a mail from the modem control unit 6 by using electronic mail software pre-installed in the control unit 7 and designating a destination address (for example, from DTV receiver A to DTV

receiver B). In this manner, a new function can be realized which can transmit recommended programs selected by the user to a particular user.

[0071]

(Another embodiment)

Next, a process of receiving (importing) the recommended program information exported from DTV receiver A 18 at DTV receiver B 17 and selecting each program by the user will be described with reference to the flow chart illustrating the recommended program import process in Fig. 8.

[0072]

The structure of DTV receiver B 17 is similar to that of DTV receiver A 18. The operation is therefore described with reference to the block diagram shown in Fig. 1.

(Operation in program election of imported recommended programs)

At Step 8201, if the user does not select a recommended program reception mode from the remote commander 13-a, the control unit 7 judges that the mode is the normal program selection mode, and performs a normal program selection mode at Step S102 to following Steps shown in Fig. 2.

[0073]

If the user selects at Step S201 the recommended program import mode, a process of importing an export format

file at Step S202 is executed which is characteristic to this embodiment.

[0074]

The user acquires the export file and then supplies it to its system. Two methods of acquiring the export file are conceivable. One method is to acquire the export file from the home page of the user who recommended programs, by using a WWW browser pre-installed in the control unit 7 and accessing the WWW server via the modem control unit 6.

[0075]

Another method is to acquire the export file as a file attached to a mail from user, via the modem control unit 6 by using electronic mail software pre-installed in the control unit 7.

[0076]

In each of the methods, the imported export file is written in the memory unit 10. This process continues until the user confirms at Step S203 a completion of the reception process, because there is a possibility that one or more export format files are acquired. At Step S204 a recommended program selection support screen is generated from one or more export format files and displayed.

[0077]

Fig. 7 shows an image side of the recommended program list selection screen. In the method of making this screen,

the control unit 7 operates to read export format lists shown in Figs. 5 and 6 from the memory unit 10. If the file is a program direct selection designation export format file, direct designation import program display windows (in the example shown in Fig. 7, two windows) are generated, whereas if the file is a search condition designation export format file, a search condition designation import program display window (in the example shown in Fig. 7, one window) is generated.

[0078]

At the same time when these windows are displayed, the number of imported recommended program lists is also displayed. The contents of each window are constituted of icon data, the name of a making-up person, a compatibility period, the number of recommended program lists, and comments. In order to display the recommended program list selection screen having the layout shown in Fig. 7, the control unit 7 checks the identification tags for the data items in the export format file shown in Figs. 5 and 6, such as (1) making-up person name, (3) icon data, (4) pickup list information, (5) compatible service name, (6) compatibility period, and (7) the number of registered programs, and then issues a drawing command to the EPG generation unit 8.

[0079]

The identification tags for (6) compatibility period

and (7) the number of registered programs are not defined for the search condition designation export format file so that the contents thereof are not displayed in the window.

[0080]

At Step S206, the user looks at this screen and selects a desired recommended program from the recommended program list selection screen by using the selection cursor. After the recommended program list is decided at Step S206, the flow advances to Step S207 and following Steps whereat system compatibility of each imported recommended program list is checked.

[0081]

(Check of compatibility of imported recommended program list)

At Step S207 service compatibility is checked. The control unit 7 checks whether the service written in the identification tag <(5) compatibility service name> in the export format file of the recommended program selected at Step S206 is compatible with the broadcasting service usable by DTV receiver B 17.

[0082]

If it is judged at Step S208 that there is a problem in service compatibility, then at Step S218 a incompatibility message is output. For example, if the imported recommended program is compatible with "Direct TV" although the

broadcasting service usable at DTV receiver B is "Sky Perfect TV", then the selection of this recommended program list is meaningless. In this case, this effect is notified to the user on the screen of the display device to suggest the user to select another recommended program list.

[0083]

If it is judged at Step S208 that there is no problem in service compatibility, the flow advances to Step S209 whereat the form of the designated recommended program list is checked. If it is judged that the list form is the program direct selection form, the flow advances to Step S211 whereat the program information is renewed to the latest program information. Specifically, the control unit 7 compares the contents described in the tags <(9) broadcasting date and time> of all programs registered in the recommended program list with the latest program attribute data. If there is any time shift to be made, for example, by a prolongation of a baseball relay broadcast, the program information is updated.

[0084]

Next, at Step S212 compatibility of the import period is checked. Namely, it is checked whether the compatibility period described in the discrimination tag <(6) compatibility period> is compatible with the current date and time at DTV receiver B 17.

[0085]

Specifically, if there is even one recommended program whose compatibility period was expired, it is judged at Step S213 that there is a problem in the import period, and the flow advances to Step S219. If all the recommended programs are judged as incompatibility (all the recommended programs were already broadcast), an incompatibility message is output at Step S218. This effect is notified to the user on the screen to suggest the user to select another recommended program list.

[0086]

If it is judged at Step S219 that all the recommended programs are not judged as incompatibility (only some recommended programs were already broadcast), the flow advances to Step S220 whereat a message is displayed on the screen, indicating that the recommended programs only in the compatible period are picked up and the other recommended programs are not displayed.

[0087]

In this case and the case that it is judged at Step S213 that there is no problem in compatibility of the import period (the recommended program is not still broadcast), then the flow advances to Step S214 whereat PPV compatibility is checked.

[0088]

At this Step S214, the control unit 7 compares the contents described in the identification tags <(12) PPV or not) of all picked-up and registered recommended programs with the current PPV contract state of the user. If there is even one recommended program without a PPV contract, it is judged at Step S215 that there is a problem in compatibility, to thereafter follow Step S221.

[0089]

At Step S221, programs which cannot be looked at and listened to because of no PPV contract are listed up from the recommended programs, a warning message is displayed to the user, and only the alerting process is performed.

[0090]

In this case and the case that it is judged at Step S215 that there is no problem in PPV compatibility (the user already made the PPV contract for all PPV programs in the recommended programs, or the recommended programs do not include PPV programs), the flow advances to Step S216 whereat compatibility of audio-visual restriction is checked.

[0091]

At Step S216 the control unit 7 compares the contents described in the identification tags <(13) audio-visual restriction or not> of all the picked-up and registered programs with the present registered age of the user. If there is even one program under the audio-visual restriction

because of the present user age recognized by the system, it is judged at Step S217 that there is a problem in compatibility of audio-visual restriction, and the flow advances to Step S222.

[0092]

At Step S222 programs which cannot be looked at and listened to because of the user age are listed up from the recommended programs, and a warning message is displayed to the user, and only the alerting process is performed. In this case and the case that it is judged at Step S217 that there is no problem in compatibility of audio-visual restriction, the flow advances to Step S223 whereat an import process after the compatibility check is performed.

[0093]

The processes at Steps S211 to S223 are performed when the recommended program list selected at Step S209 is of the program direct designation form. If it is judged at Step S209 that the program list selected at Step S209 is of the search condition designation form, the flow advances to Step S210 whereat a filter process using the retrieval conditions is performed. Specifically, only the programs satisfying the search conditions are retrieved and extracted from using the latest program information broadcasted for a constant period and received in accordance with the imported retrieval condition, and stored in the memory unit 10.

[0094]

This filter process does not constitute the main feature of this embodiment so that the details thereof are not given herein. After Step S210, the flow jumps to Step S214. The processes at Step S214 and following Steps (to Step S223) are similar to those for the above-described program direct designation form.

[0095]

<Import process after compatibility check >

The import process at Step S223 after the compatibility check will be detailed with reference to the flow chart of Fig. 9 illustrating the import process after the compatibility check.

[0096]

At Step S301 the program list passed the compatibility check is stored in the memory unit 10. Next, at Step S302 a list of programs passed the compatibility check and sorted in the date ascending order is displayed on the display screen.

[0097]

The user looks at this displayed list and if the user wants to select all recommended programs listed up at Step S303, then the flow advances to Step S311, whereas if the user wants to further narrow down the programs, the flow advances to Step S304 and following Steps to enter a narrow-

down support mode by displaying the sorted picked-up programs.

[0098]

If a recommendation index sort is selected at Step S304, then at Step S305 the control unit 7 operates to read the picked-up data from the memory unit 10 and display a recommendation sort screen shown in Fig. 10 by referring to the index (in this embodiment, five-step evaluation) described in the identification tag <(15) recommendation index information> added when the user entered the recommendation index during the export file formation.

[0099]

This recommendation index sort screen can be displayed only if it is judged at Step S209 that the import form is the program direct designation form, and Step S305 is neglected if the import formed is judged as the retrieval condition designation form. If a genre sort is selected at Step S306, the flow advances to Step S307 whereat the control unit 7 operates to read picked-up data from the memory unit 10 and display a genre sort screen shown in Fig. 11 by referring to the genre contents described in the identification tag <(11) genre> automatically added by using the received data during the export file formation.

[0100]

If a charge limit sort is selected at Step S308, the

flow advances to Step S309 whereat the control unit 7 operates to read picked-up data from the memory unit 10 and display a charge limit sort screen shown in Fig. 12 by referring to the PPV contents (charge information or the like of a PPV program) described in the identification tag <(12) PPV or not> automatically added by using the received data during the export file formation.

[0101]

After that, at Step S310 while looking at the screen, the user can instruct a deletion of a recommended program (program group) not desired, by using a selection cursor shown in Figs. 10 to 12 on the displayed sort screen. The program to be deleted is also deleted from the memory unit 10.

[0102]

This narrow-down process continues until the user judges at Step S303 that the narrow-down process is not necessary. In this embodiment, a combination of these three sort patterns may also be used for the narrow-down process.

[0103]

If the user judges at Step S303 that the narrow-down process is not necessary, the flow advances to Step S311 whereat the final narrowed-down program list is stored in the memory unit 10.

[0104]

If the user instructs at Step S312 an import EPG screen display using the narrowed-down list, the flow advances to Step S313 whereat the control unit 7 reads the final narrowed-down programs from the memory unit 10.

In accordance with the narrowed-down program data and the program data extracted by the program information extraction unit 6, the picture generation unit 8 generates an import EPG screen such as shown in Fig. 13 which is displayed on the display device 11. A main difference of the screen shown in Fig. 13 from the normal EPG screen resides in that programs other than the recommended programs are blacked out and are not displayed.

[0105]

Another difference resides in that user program information such as a recommendation index, a URL related to the program and user recommendation comments is mixed to the received program data. Such user information can be displayed through recognition, by the control unit 7, of the identification tags for (15) recommendation tag information, (16) related link URL and (17) recommendation comments in the export format file shown in Fig. 5.

[0106]

Such user information is not displayed understandably if the import form is the retrieval condition designation form, because the identification tag is not defined. On

this import EPG screen, the user can select a desired program by moving the cursor to the desired program position by using the motion keys of the remote commander 13-a and by clicking the program decision button of the remote commander 13-a. The control unit 7 then operates to make the tuner unit 1 tune in the station so that the desired program is displayed.

[0107]

(Another embodiment of the present invention)

The invention is also applicable to a system having a plurality of apparatuses (e.g., a host computer, an interface apparatus, a reader, a printer and the like) or to a single apparatus.

[0108]

The scope of the invention contains also the case wherein software program codes realizing the function of each embodiment described above are supplied to a computer (CPU or MPU) of the apparatus or system connected to various devices realizing the embodiment function, and the computer operates the devices in accordance with the stored programs.

[0109]

In this case, the software program codes themselves realize the embodiment function. Therefore, the program codes themselves and means for supplying the program codes, e.g., a storage medium storing the program codes, constitute

the present invention. The storage medium for storing such program codes may be a floppy disk, a hard disk, an optical disk, a magnetooptical disk, a CD-ROM, a magnetic tape, a nonvolatile memory card, a ROM or the like.

[0110]

It is obvious that the program codes are included in the embodiment of the invention, wherein not only the computer executes the supplied program codes to realize the embodiment function but also the program codes in cooperation with an OS (operating system) running on the computer or with another application or the like realize the embodiment function.

[0111]

It is obvious that the scope of the invention also contains the case wherein the functions of each embodiment can be realized by writing the program codes into a memory of a function expansion board inserted into a computer or of a function expansion unit connected to the computer, and thereafter by executing a portion or the whole of actual processes by a CPU of the function expansion board or function expansion unit.

[0112]

[Advantages]

According to each embodiment of the invention described above, because the function of exporting (transmitting) the

recommended programs to the outside, which is impossible in the conventional digital television receiver, is provided, even if the number of programs caused by digitalization increases, TV programs recommended by a user can be easily supplied to a number of unknown other users. It is easy to select a desired program from a plurality of received channels and tune in the program.

[0113]

Also, according to another feature of the present invention, because the function of importing (receiving) the recommended programs from the outside is provided, programs recommended by users having a common preference can be looked with ease without performing a complicated work by a user of positively searching a preferred program. Requirements for a simple and comfortable tuning by users, particularly passive users, can be met.

[Brief Description of the Drawings]

[Fig. 1]

Fig. 1 is a block diagram showing the structure of a display system.

[Fig. 2]

Fig. 2 is a flow chart illustrating a process of exporting a recommended program.

[Fig. 3]

Fig. 3 is a diagram showing an image illustrating a

normal program selection process.

[Fig. 4]

Fig. 4 is a diagram showing an image illustrating a recommended program direct selection process.

[Fig. 5]

Fig. 5 is a diagram showing a direct program designation export format.

[Fig. 6]

Fig. 6 is a diagram showing a retrieval condition designation export format.

[Fig. 7]

Fig. 7 is a diagram showing an image of an import EPG selection screen.

[Fig. 2]

Fig. 8 is a flow chart illustrating a recommended program import process.

[Fig. 9]

Fig. 9 is a flow chart illustrating an import process after compatibility check.

[Fig. 10]

Fig. 10 is a diagram showing an image of a recommendation sort screen.

[Fig. 11]

Fig. 11 is a diagram showing an image of a genre sort screen.

[Fig. 12]

Fig. 12 is a diagram showing an image of a charge limit sort screen.

[Fig. 13]

Fig. 13 is a diagram showing an image of an import EPG selection screen.

[Reference Numerals]

- 1: tuner unit
- 2: demodulation unit
- 3: demultiplexing unit
- 4: video and audio processing unit
- 5: EPG synthesization unit
- 6: program information extraction unit
- 7: control unit
- 8: EPG generation unit
- 9: ROM
- 10: memory unit
- 11: display device
- 12: IR receiving unit
- 13-a: remote commander
- 13-b: keyboard
- 14: modem control unit
- 15: internet
- 16: WWW server
- 17: DTV receiver B

- 18: DTV receiver B
- 19: peripheral control unit
- 20-a: personal computer
- 20-b: digital camera

[Name of Document] ABSTRACT

[Abstract]

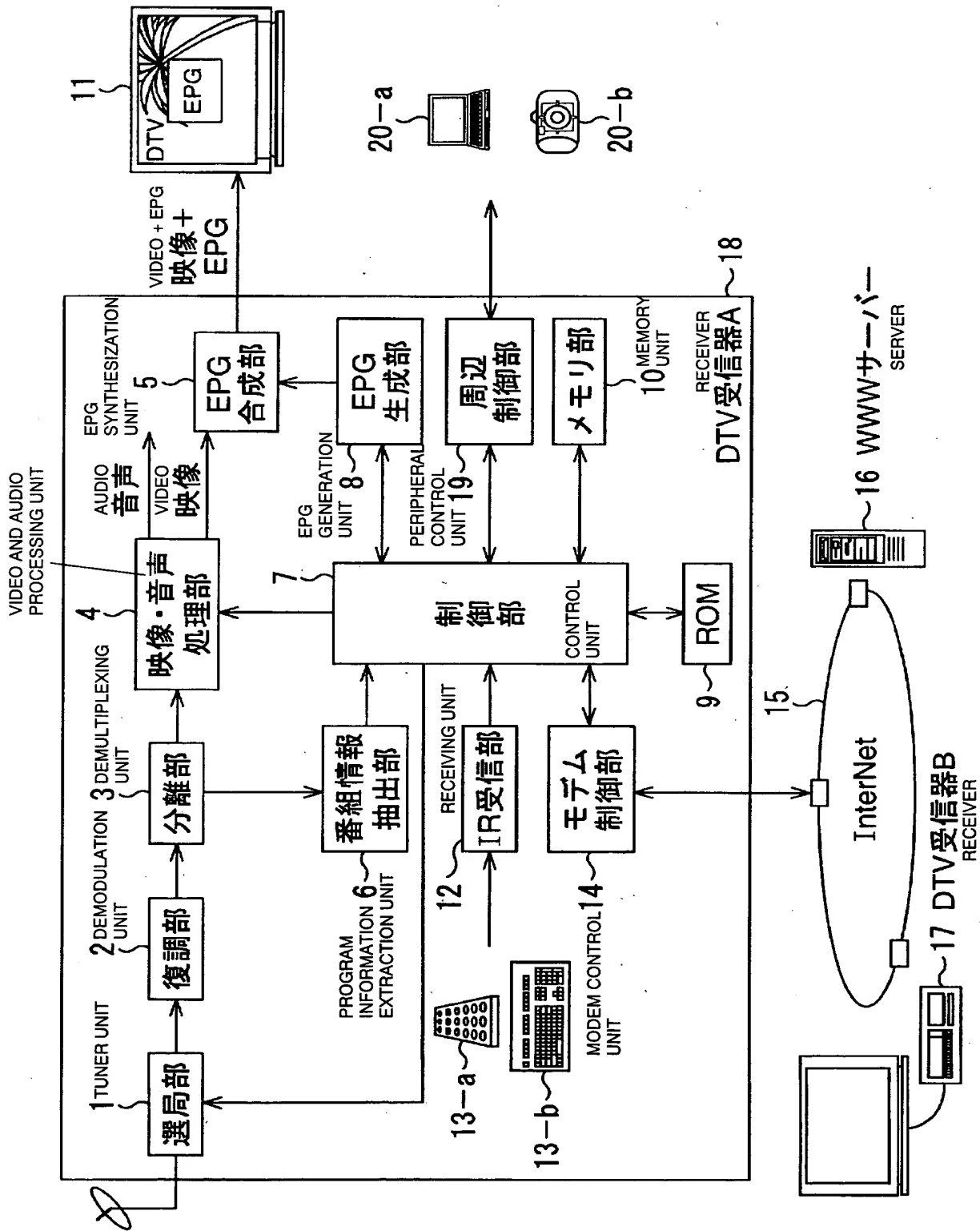
[Object] To enable a user to select and tune a desired program among the plurality of received channel information easily.

[Solving Means] A digital television receiving apparatus is provided with means of directly selecting recommended programs on the EPG screen and is provided with a function for exporting (transmitting) the direct-designated data to the outside as the recommended program, or a function for exporting (transmitting) the data to the outside as retrieval condition data, thereby providing program information reflected by preference to another use, and thereby automatically judging system compatibility of the recommended programs for another user, updating only compatible programs together with the newest program information that is transmitted from the broadcast station, and enjoying the programs recommended by the user who has similar preference, without searching preference programs positively.

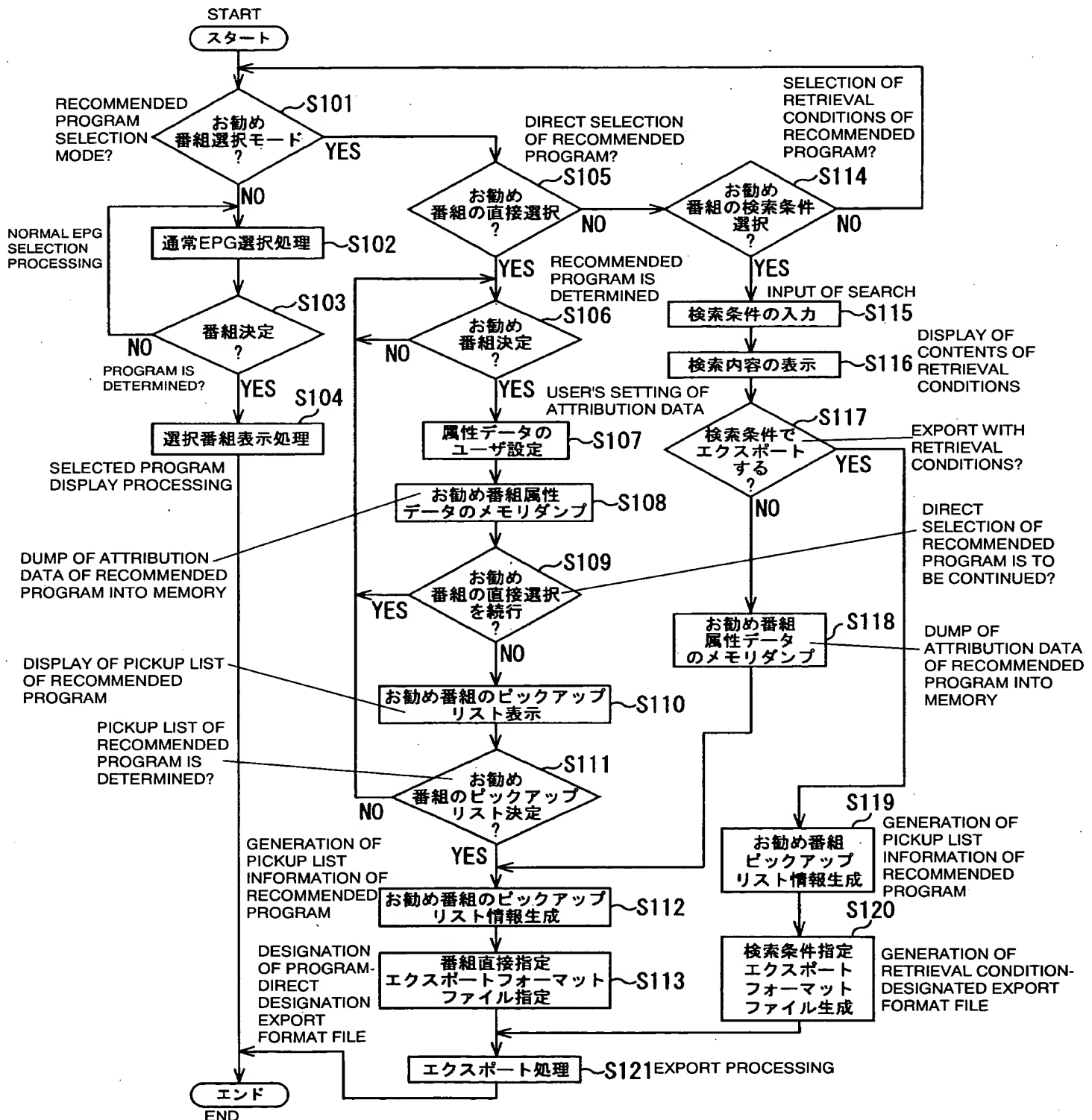
[Selected Figure] Fig. 1

【書類名】 図面 [Name of Document] DRAWINGS

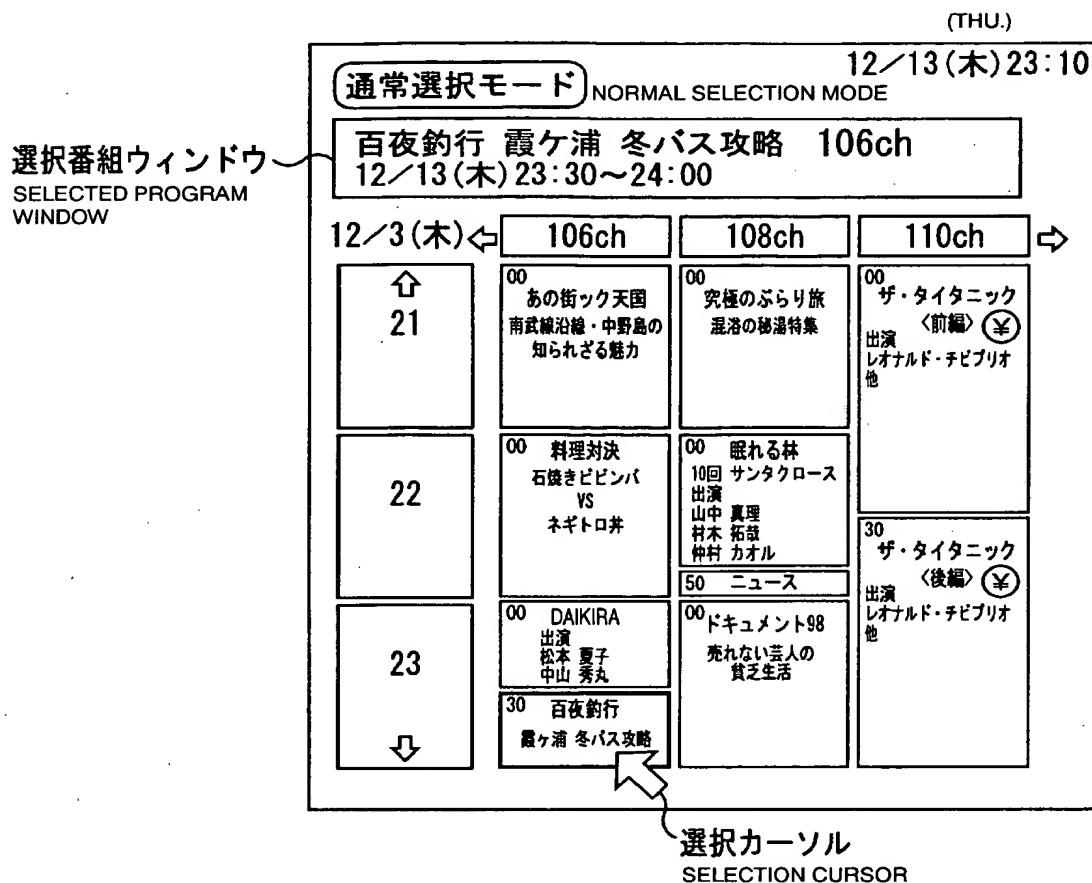
【図 1】[FIG. 1]



【図2】[FIG. 2]



【図3】[FIG. 3]



【図4】[FIG. 4]

(THU.)

12/13(木) 23:10

お勧め選択モード RECOMMENDED PROGRAM SELECTION MODE

SELECTED PROGRAM WINDOW
選択番組ウィンドウ

百夜釣行 霞ヶ浦 冬バス攻略 106ch
12/13(木) 23:30~24:00

RECOMMENDATION INDEX INPUT WINDOW
お勧め指数入力ウィンドウ

あなたのお勧め度をチェックしてください
CHECK YOUR RECOMMENDATION INDEX

☆☆☆☆☆

SELECTION CURSOR
選択カーソル

RELATED URL INPUT WINDOW
関連URL入力ウィンドウ

関連するURLがあったら入力してください

http:// www.○×△.co.jp
http:// www. |

INPUT RELATED URL IF YOU HAVE

RECOMMENDATION COMMENTS INPUT WINDOW
お勧めコメント入力ウィンドウ

お勧めコマンドがあったら入力してください

私がこの番組を進める理由は、 |

INPUT RECOMMENDATION COMMENTS IF YOU HAVE

THE REASON WHY I RECOMMEND THIS PROGRAM IS

	12/3(木) ⇐	106ch	108ch	110ch ⇒
↑ 21	00 あの街ツク天国 南武線沿線・中野島の 知られざる魅力 ☆☆☆☆☆	00 究極のぶらり旅 混浴の秘湯特集	00 ザ・タイタニック 〈前編〉 ¥ 出演 レオナルド・チビプリオ 他	
22	00 料理対決 石焼きビビンバ VS ネギトロ丼	00 眠れる林 10回 サンタクロース 出演 山中 真理 村★ 佐藤☆☆☆ 仲村 カオル	30 ザ・タイタニック 〈後編〉 ¥ 出演 レオナルド・チビプリオ 他	
23 ↓	00 DAIKIRA 出演 松本 夏子 中山 秀丸 30 百夜釣行 霞ヶ浦 冬バス攻略	50 ニュース 00ドキュメント98 売れない芸人の 貧乏生活		

【図5】[FIG 5]



【図6】[FIG. 6]

<お勧め番組作成情報>	RECOMMENDED PROGRAM MAKING-OUT INFORMATION
(1) 作成者	(1) MAKING-OUT PERSON'S NAME
(2) 作成日	(2) MAKING-OUT DATE
(3) アイコンデータ	(3) ICON DATA
(4) 作成内容のコメント	(4) COMMENTS FOR MAKE-OUT CONTENTS
<適合情報>	COMPATIBILITY INFORMATION
(5) 適合サービス名	(5) COMPATIBLE SERVICE NAME
<コンテンツ情報>	CONTENTS INFORMATION
(18) 検索条件	(18) RETRIEVAL CONDITIONS

【図7】[FIG. 7]


(THU.)
12/24(木)23:10

THREE RECOMMENDED PROGRAM LIST ARE NOW IMPORTED
現在インポートされているお勧め番組リストは3件です。


DIRECT-DESIGNATION IMPORT
PROGRAM DISPLAY WINDOW
直接指定インポート番組
表示ウィンドウ

選択カーソル
SELECTION
CURSOR


ICON DATA
アイコンデータ



作成者:みか
適合期間:98年12月13日~98年12月31日
適合サービス:Sky Perfect TV
お勧め番組数:40件
コメント:年末年始はお勧め番組が目白押し、
私は結構ミーハーな方だから選んだ番組は、
今はやりの物ばかりで~す。



作成者:まらいあ
適合期間:98年12月24日~99年1月5日
適合サービス:Direc TV
お勧め番組数:10件
コメント:私は年末年始は音楽三昧で過ごします。
だから選んだ番組も最新ヒットチャートの音楽
ジャンルばかりです。日本のポップスはちょっと
入ってないのでごめんなさい。



作成者:きやのんMAN
適合期間:特になし
適合サービス:BSデジタル放送
お勧め番組数:特になし
コメント:僕はスポーツ番組ばかりをピックアップしました。
特に番組は指定してないけどこの検索条件で
ラグビーやサッカーをもれなく検索できると思うよ。

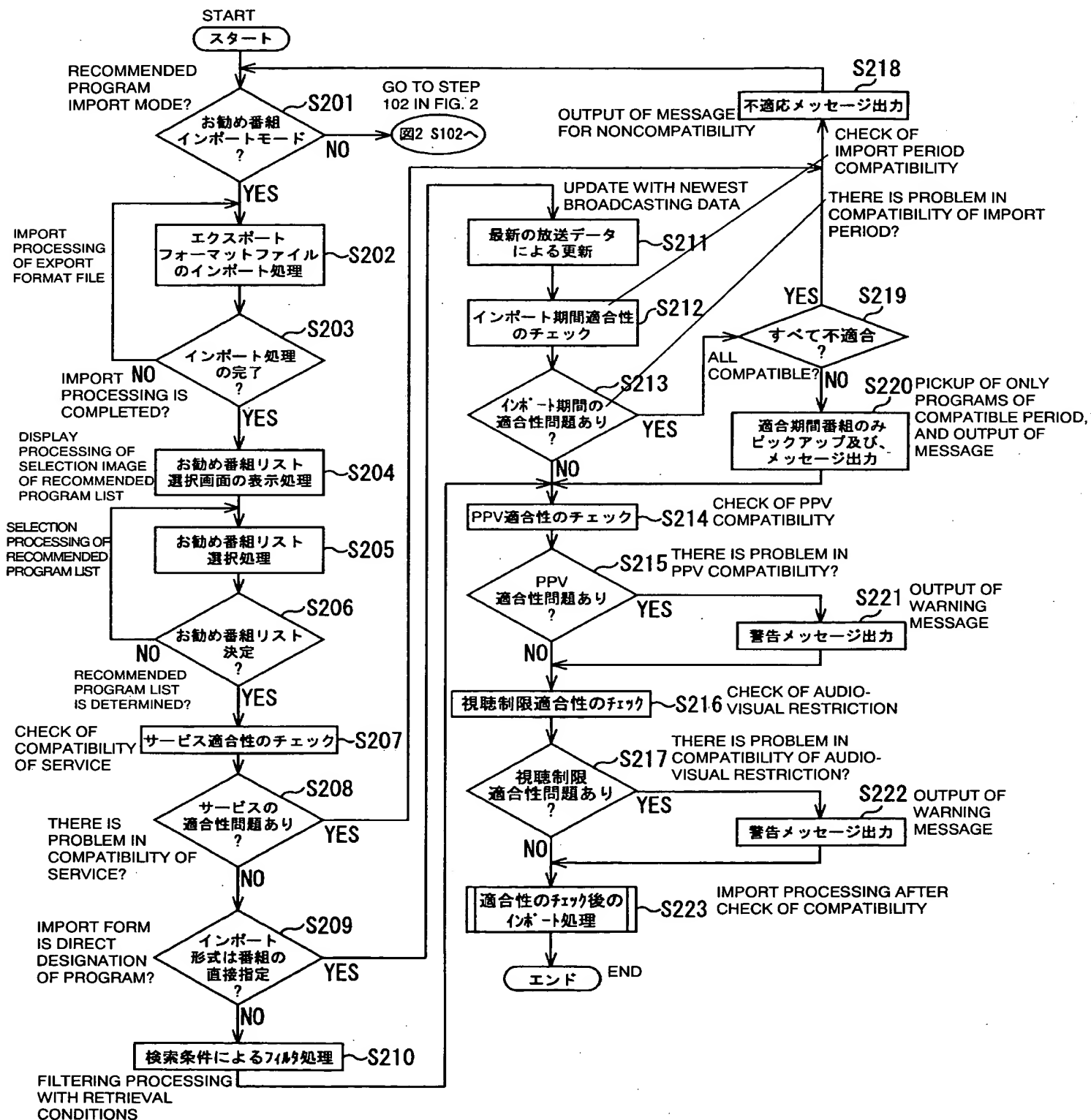
RETRIEVAL CONDITION DESIGNATED IMPORT PROGRAM DISPLAY WINDOW
検索条件指定インポート番組
表示ウィンドウ

MAKING-OUT PERSON'S NAME: MIKA
COMPATIBILITY PERIOD: 12/13/1998-12/31/1998
COMPATIBLE SERVICE: SKY PERFECT TV
NUMBER OF RECOMMENDED PROGRAMS: 40
COMMENTS: THERE ARE JAMMED WITH RECOMMENDED PROGRAM AT THE END OF YEAR AND BEGINNING OF NEW YEAR. PROGRAMS I SELECTED ARE ALL POPULAR NOW SINCE I AM RATHER TOM, DICK, AND HARRY.

MAKING-OUT PERSON'S NAME: MARAIA
COMPATIBILITY PERIOD: 12/24/1998-1/5/1999
COMPATIBLE SERVICE: DIREC TV
NUMBER OF RECOMMENDED PROGRAMS: 10
COMMENTS: I AM GOING TO BE ABSORBED IN MUSIC AT THE END OF YEAR AND BEGINNING OF NEW YEAR. SO, I SELECTED PROGRAMS ALL DIRECTED TO NEWEST HIT CHART. BUT, SORRY FOR NOT INCLUDING JAPANESE POP MUSIC.

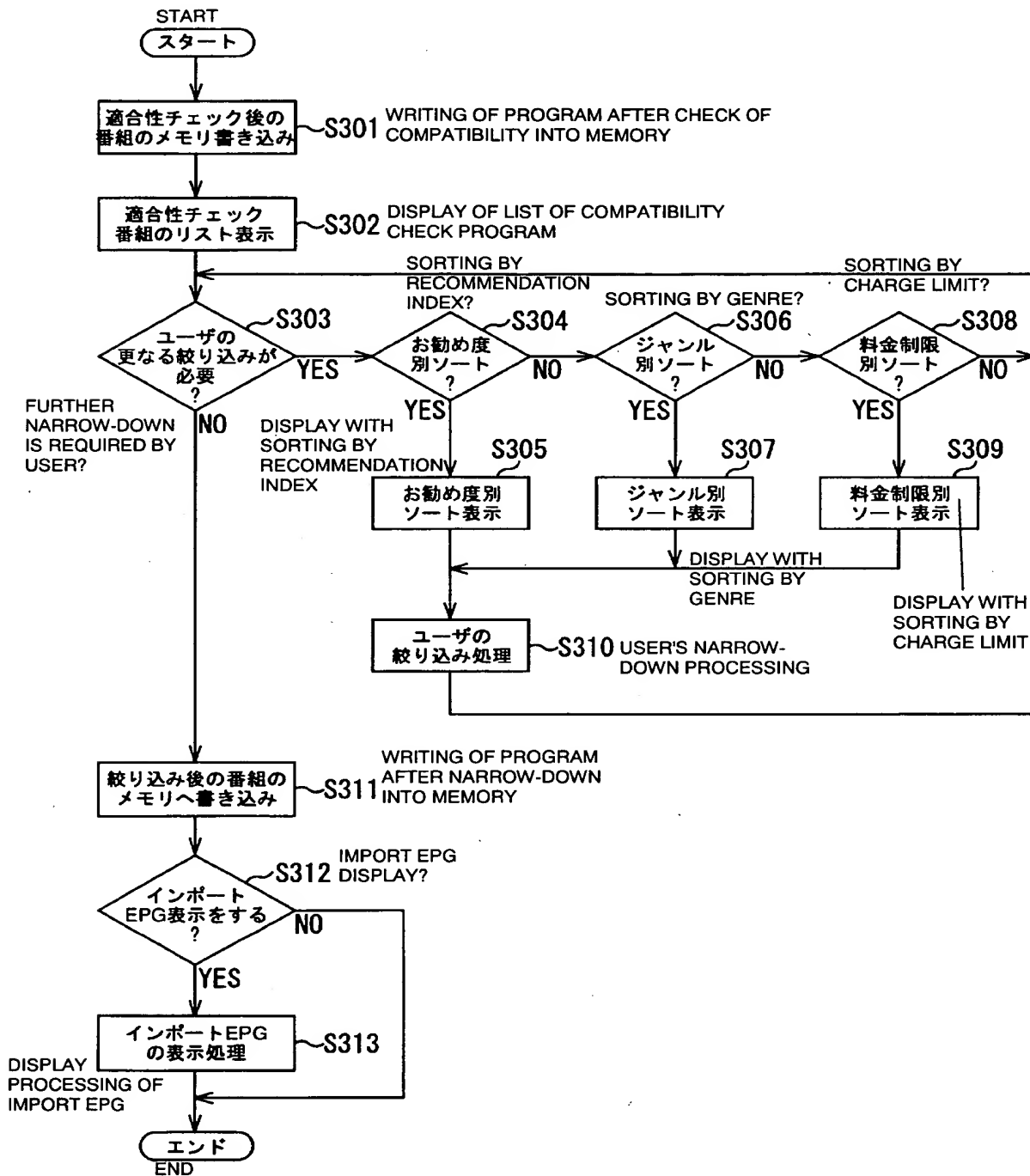
MAKING-OUT PERSON'S NAME: KIYANONMAN
COMPATIBILITY PERIOD: NOT IN PARTICULAR
COMPATIBLE SERVICE: BS DIGITAL BROADCASTING
NUMBER OF RECOMMENDED PROGRAMS: NOT IN PARTICULAR
COMMENTS: I PICKED-UP ONLY PROGRAMS OF SPORT. I DO NOT SPECIFY PARTICULAR PROGRAM, BUT I THINK THAT YOU CAN RETRIEVE PROGRAMS OF RUGBY OR SOCCER WITH THIS RETRIEVAL CONDITIONS.

【図8】FIG. 8



整理番号=3902049

【図9】[FIG. 9]



【図10】[FIG 10]

(FRI.)

12/25(金)20:10

THERE ARE TEN RECOMMENDED PROGRAMS
お勧め番組は10件です。

RECOMMENDATION INDEX (5)--THREE
☆☆☆☆☆ お勧め指数(5)――3件

番組A PROGRAM A

番組B PROGRAM B

番組C PROGRAM C

RECOMMENDATION INDEX (4)--THREE
☆☆☆☆☆ お勧め指数(4)――3件

番組D PROGRAM D

番組E PROGRAM E

番組F PROGRAM F

RECOMMENDATION INDEX (3)-- ONE
☆☆☆☆☆ お勧め指数(3)――1件

番組G PROGRAM G

RECOMMENDATION INDEX (2)-- NONE
☆☆☆☆☆ お勧め指数(2)――0件

NO PROGRAM TO BE RECOMMENDED
対象番組はありません。

RECOMMENDATION INDEX (1)--THREE
☆☆☆☆☆ お勧め指数(1)――3件

PROGRAM H

PROGRAM I

PROGRAM J

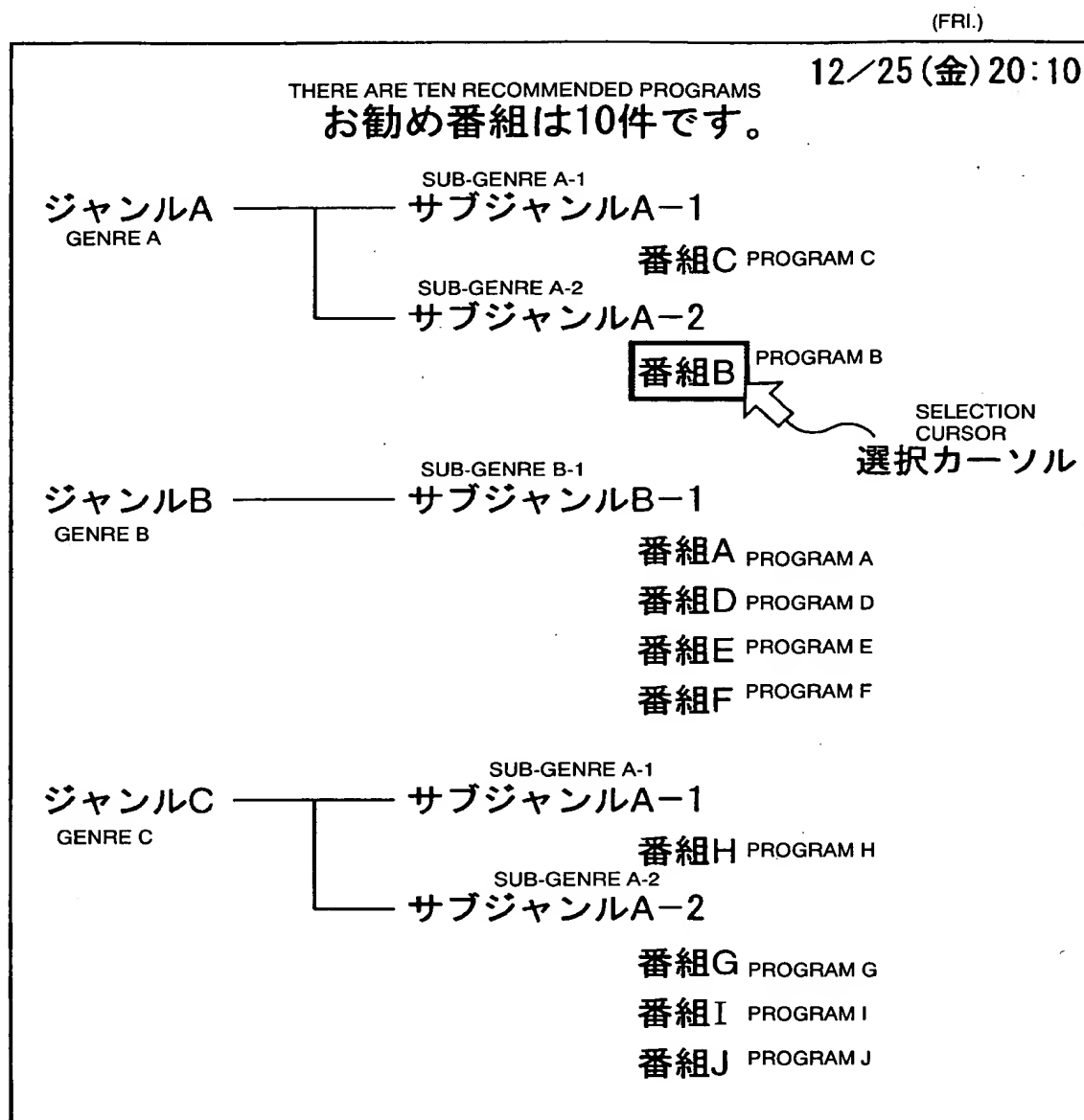
番組H

番組I

番組J

SELECTION CURSOR
選択カーソル

【図11】[FIG. 11]



【図12】[FIG. 12]

(FRI.)

12/25(金)20:10

THERE ARE TEN RECOMMENDED PROGRAMS

お勧め番組は10件です。

PICKUP OF PROGRAM OF PPV CHARGE MORE THAN 2000 YEN

PPV料金2000円以上をピックアップ

――0件あります THERE IS NO PROGRAM.

PICKUP OF PROGRAM OF PPV CHARGE FROM 1000 YEN TO 19999 YEN

PPV料金1000円～19999円をピックアップ

――1件あります
THERE IS ONE PROGRAM.

SELECTION CURSOR
選択カーソル

PICKUP OF PROGRAM OF PPV CHARGE FROM ONE YEN TO 999 YEN

PPV料金1円～999円をピックアップ

――5件あります THERE ARE FIVE PROGRAMS.

PICKUP OF ONLY FREE PROGRAM

無料番組のみをピックアップ

――4件あります
THERE ARE FOUR PROGRAMS.

【図13】[FIG. 13]

